Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of:	)	
	)	
Federal Communications Commission Invites Comment on Ligado's Request to Initiate a Rulemaking Proceeding to Allocate the 1675-1680 MHz Band for Terrestrial Mobile Use Shared with Federal Use	)	RM-11681

COMMENTS OF
THE NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL

The National Public Safety Telecommunications Council (NPSTC) submits these comments in response to the Commission's Public Notice inviting input on Ligado Networks LLC's (previously LightSquared's) request that the Commission initiate a rulemaking proceeding to allocate the 1675-1680 MHz Band for non-federal terrestrial mobile use on a shared basis with federal users.[1] As addressed in these comments, the Commission should proceed cautiously, given the importance of accurate and timely weather information to the public safety community, including emergency managers. Spectrum sharing in the 1675-1680 MHz band should be pursued only if doing so would not impact the integrity, reliability and speed of weather information gathering and distribution conducted by the National Weather Service (NWS), National Oceanic and Atmospheric Administration (NOAA) and private entities through the use of 1675-1680 MHz and adjacent spectrum.

[1] Comment Sought to Update the Record on Ligado's Request that the Commission Initiate a Rulemaking Proceeding to Allocate the 1675-1680 MHz Band for Terrestrial Mobile Use Shared with Federal Use, DA 16-443, released April 22, 2016.

The National Public Safety Telecommunications Council

The National Public Safety Telecommunications Council is a federation of public safety organizations whose mission is to improve public safety communications and interoperability through collaborative leadership. NPSTC pursues the role of resource and advocate for public safety organizations in the United States on matters relating to public safety telecommunications. NPSTC has promoted implementation of the Public Safety Wireless Advisory Committee (PSWAC) and the 700 MHz Public Safety National Coordination Committee (NCC) recommendations. NPSTC explores technologies and public policy involving public safety telecommunications, analyzes the ramifications of particular issues and submits comments to governmental bodies with the objective of furthering public safety telecommunications worldwide. NPSTC serves as a standing forum for the exchange of ideas and information for effective public safety telecommunications.

The following 16 organizations serve on NPSTC's Governing Board:

American Association of State Highway and Transportation Officials
American Radio Relay League
Association of Fish and Wildlife Agencies
Association of Public-Safety Communications Officials-International
Forestry Conservation Communications Association
International Association of Chiefs of Police
International Association of Emergency Managers
International Association of Fire Chiefs
International Municipal Signal Association
National Association of State Chief Information Officers
National Association of State Emergency Medical Services Officials
National Association of State Foresters
National Association of State Technology Directors
National Council of Statewide Interoperability Coordinators
National Emergency Number Association
National Sheriffs' Association

Several federal agencies are liaison members of NPSTC. These include the Department of Homeland Security (the Federal Emergency Management Agency, the Office of Emergency Communications, the Office for Interoperability and Compatibility, and the SAFECOM Program); Department of Commerce (National Telecommunications and Information Administration); Department of the Interior; and the Department of Justice (National Institute of Justice, Communications Technology Program). Also, Public Safety Europe is a liaison member. NPSTC has relationships with associate members: The Canadian Interoperability Technology Interest Group (CITIG) and the Utilities Technology Council (UTC), and affiliate members: The Alliance for Telecommunications Industry Solutions (ATIS), Open Mobile Alliance (OMA), Telecommunications Industry Association (TIA), TETRA Critical Communications Association (TCCA), and Project 25 Technology Interest Group (PTIG).

NPSTC Comments

On November 2, 2012, LightSquared, now rebranded as Ligado Networks, LLC ("Ligado") submitted a petition requesting that the Commission initiate a rulemaking proceeding to allocate the 1675-1680 MHz band for non-federal terrestrial mobile use on a shared basis with federal users.[2] The Commission originally issued a Public Notice on November 9, 2012, and received comments on the proposal. More recently, the Commission issued its current Public Notice seeking to update and refresh the record.

In its current Public Notice the Commission specifies how the 1675-1680 MHz and adjacent spectrum is used on a primary basis for collection and dissemination of meteorological information:

[2] In its Public Notice, the Commission notes the transition of the LightSquared company name. Following LightSquared's emergence from bankruptcy in December 2015, many of its filings in these proceedings have been submitted under the name "New LightSquared." Subsequently, on February 10, 2016, New LightSquared was rebranded as Ligado Networks LLC. Accordingly, NPSTC will use the term Ligado in these comments.

> The 1675-1683 MHz portion of the 1675-1695 MHz band currently is used widely by NOAA for radiosondes, but in 2014 these radiosondes were scheduled to be relocated to the 401-406 MHz band by February 19, 2021. The National Telecommunications and Information Administration (NTIA) has assigned several frequencies throughout the 1675-1695 MHz band to NOAA for Geostationary Operational Environmental Satellites-N Series (GOES-N) downlinks, with the 1673.4-1678.6 MHz portion of the band being used for Sensor Data Links at four locations(Wallops Island, Virginia; Greenbelt, Maryland; Omaha, Nebraska; and Fairbanks, Alaska). In addition, the National Weather Service uses GOES-N downlinks from 1680.5 to 1694.5 MHz at several locations (Miami, Florida; Kansas City, Missouri; Suitland, Maryland; Norman, Oklahoma; Boulder, Colorado; Honolulu, Hawaii; and Anchorage, Alaska). To provide improved detection and observation of environmental phenomena, NOAA plans to launch the first satellite of its next generation GOES-R Series in October 2016, using frequencies in the 1679.7-1694.7 MHz band. Existing GOES systems will continue to use the 1675-1678.6 MHz portion of the 1675-1680 MHz band for Sensor Data Links until as late as 2025, while GOES-R systems will become operational in the upper portion of that band at 1679.7-1680 MHz as early as 2017. NOAA, the Department of Defense (DOD), the National Aeronautics and Space Administration (NASA), the Department of Interior, the Federal Aviation Administration, and other federal and non-federal entities operate earth stations that receive environmental research and weather data transmitted from both GOES and Polar-Orbiting Environmental Satellites (POES) in the 1675-1710 MHz band.[3]

The Public Notice explains that radiosondes collect and provide near real-time environmental data used for warnings and forecast of weather events such as tornadoes and tropical cyclones, and that radiosondes are launched twice a day from nearly 90 sites throughout the United States and its possessions.

The record in this proceeding to date includes three reports by Alion Science and Technology, commissioned by Ligado. Ligado indicates these reports show sharing of the 1675-1680 MHz spectrum is feasible.[4] The Alion studies essentially rely on the eventual location of radiosondes from the 1675-1683 MHz band to the 401-406 MHz band and the use of protection zones and prior coordination of LTE terrestrial sites around NOAA and NWS earth station sites.

[3] Public Notice DA 16-443 at pages 2 and 3 (footnotes omitted).
[4] LightSquared Ex Parte filings, including attachments from Alion Science and Technology, January 30, 2014 and April 14, 2014.

In contrast, a number of other parties have submitted comments and Ex Parte filings expressing significant concerns about the potential impact of the proposed spectrum sharing to the collection and reception of weather information used to protect the public and ensure safe and efficient commerce. These filings collectively detail how the NWS and NOAA operations in the 1675-1680 MHz and adjacent bands are used to provide up-to-date information on the tracking of hurricanes and tornados, water levels on the Great Lakes and along U.S. coast lines, the presence of dangerous lightning patterns, a view of expansive wildfires and the degree of volcanic ash in the atmosphere in Alaska that can impact the safe operation of aircraft.[5] In addition, the record includes comments and Ex Parte filings by television broadcast interests noting the need for fast and accurate NWS and NOAA weather information collection and distribution so broadcasters can provide up-to-date weather information to the general public, especially during major weather incidents.

Some of these filings on record also indicate the reception of this critical weather information is accomplished through private sector satellite receive sites that obtain the information directly from the NWS and NOAA satellite downlinks on the 1675-1680 MHz band. Therefore, protecting only designated federal NWS and NOAA receive sites would not be a sufficient mechanism to ensure that spectrum sharing results in no negative impact.

From a NPSTC perspective, fast and accurate weather information is critical to public safety, including emergency management. Coordination with the International Association of Emergency Managers (IAEM), a member of the NPSTC Governing Board, indicates significant concern about potential interference from the proposed spectrum sharing.

IAEM has advised that its emergency managers depend on reliable, accurate and direct, timely data as a basis for emergency management decisions related to floods and flash floods, water

[5] For example, see joint Ex parte filing by the American Meteorological Society (AMS) and the National Weather Association (NWA) dated March 1, 2016.

management, severe thunderstorms, tornados and hurricanes. Real-time weather information is used as a basis to offer public warning and preparation instructions. These decisions impact not only the safety of the general public. Accurate and timely weather information is a necessary element for good decision-making regarding the deployment of public safety personnel during these extreme weather events.

Should the Commission decide to move forward with a Notice of Proposed Rulemaking on spectrum sharing at 1675-1680 MHz, NPSTC recommends the Commission support the time and process needed for research and testing to ensure any proposed spectrum sharing in the band not compromise the integrity of the NWS and NOAA weather information collection and dissemination. This research and testing should be conducted before any decision is made on spectrum sharing, and should include participation by key stakeholders, including those who provide and use the critical weather information, in addition to Ligado or its representatives.

The Commission has already recognized that this spectrum is part of that which will be used to collect weather information at least until February 2021, the current deadline when radiosonde operations are scheduled to be transitioned to the 401-406 MHz band. Given that event is almost five years away, it likely marks the earliest any potential terrestrial mobile operations could be activated. Therefore, a program for credible research and testing should not significantly delay any proposed broadband terrestrial mobile service to the public. In contrast, credible research and testing involving key stakeholders has the potential to help ensure any decisions made provide the requisite protection to the collection and dissemination of critical weather information.

Conclusion

NPSTC recommends the Commission proceed cautiously, given the importance of accurate and timely weather information to the public safety community, including emergency managers. Should the Commission decide to move forward with a Notice of Proposed Rulemaking on spectrum sharing at 1675-1680 MHz, NPSTC recommends allowing the time needed for research and testing to ensure any proposed spectrum sharing in the band would not compromise the integrity of the weather information collection and dissemination by NWS, NOAA or private entities. This research and testing should be conducted before any decision is made on spectrum sharing. The research and testing should include participation by key stakeholders, including those who provide and use the critical weather information, in addition to Ligado or its representatives. Given radiosondes will use the 1675-1680 MHz spectrum at least until the current February 2021 deadline for transition to the 401-406 MHz band, a comprehensive program for credible research and testing should not otherwise delay terrestrial mobile service to the public, while it should provide great benefits for the Commission's decision-making process on spectrum sharing.

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